IN THE CLAIMS:

Please find below a listing of all pending claims. The statuses of the claims are set forth in parentheses. For those currently amended claims, underlined emphasis indicates insertions and ~~strikethrough~~ emphasis (and/or double brackets) indicates deletions.

1. (Currently Amended) A computer-readable recording medium for storing a computer program for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, the computer program causing a computer to perform:

acquiring information related to a traffic and a communication address of a communication packet based on ~~setting information including unit time for~~ measurement parameters;

judging whether the ~~communication is~~communication has been being executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged at the judging that the communication is~~ judged to have been executed by the worm at the judging;

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting; and

changing the ~~setting information upon it being judged at the judging that~~ measurement parameters when the communication is judged to have been executed by the worm at the judging,

wherein the acquiring includes acquiring, based on the measurement parameters changed at the changing, the information ~~based on the setting~~

~~information changed at the changing~~ on the communication judged to have been executed by the worm at the judging.

2. (Canceled)

3. (Currently Amended) A computer-readable recording medium for storing a computer program for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, the computer program causing a computer to perform:

acquiring information related to a traffic and a communication address of a communication packet based on~~ setting information including unit time for~~ measurement parameters;

judging whether the communication~~ is~~ has been executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged at the judging that the communication is~~judged to have been executed by the worm at the judging;

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting; and

changing the judgment criteria~~ upon it being judged at the judging that~~ when the communication is judged to have been executed by the worm at the judging, wherein

the judging includes further judging whether the~~ communication is~~ communication judged to have been executed by the worm at the judging has been executed by the worm based on the information acquired and the judgment criteria changed at the changing.

4. (Previously Presented) The computer-readable recording medium according to claim 1, wherein the judging includes judging that a communication from a computer that is in the predetermined network segment is executed by the worm when

there is an increase in number of communication packets as well as number of destination addresses of communication packets that are transmitted from the predetermined network segment to the outside.

5. (Currently Amended) A computer-readable recording medium for storing a computer program for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, the computer program causing a computer to perform:

acquiring information related to a traffic and a communication address of a communication packet based on ~~setting information including unit time for~~ measurement parameters;

first judging whether a computer in the predetermined network segment is infected by the worm based on the information acquired and a predetermined judgment criteria;

second judging whether a plurality of computers in the predetermined network segment are infected by the worm;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication upon it being judged at the first judging that the computer is infected by the worm; and

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting, wherein the second judging includes judging that a plurality of computers in the predetermined network segment are infected by the worm when all three conditions are satisfied, the three conditions being that

a communication from the computer in the predetermined network segment is judged to be infected by the worm at the first judging,

~~there is an increase in~~a number of communication packets that are transmitted from the predetermined network segment to the outside becomes greater than a number of the communication packets transmitted from the predetermined network segment to the outside when the computer is judged to be infected by the worm at the first judging, and

a number of destination addresses of the communication packets that are transmitted from the predetermined network segment to the outside becomes greater than a number of destination addresses of the communication packets transmitted from the predetermined network segment to the outside when the computer is judged to be infected by the worm at the first judging.

6-7. (Canceled)

8. (Currently Amended) A computer-readable recording medium for storing a computer program for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, the computer program causing a computer to perform:

acquiring information related to a traffic and a communication address of a communication packet based on ~~setting information including unit time for~~ measurement parameters;

judging whether the communication is executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication upon it being judged at the judging that the communication is executed by the worm; and

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting

wherein the judging includes ~~predicting~~ identifying a type of the worm by comparing features of a first communication ~~judged to be executed by a worm~~ with features of a second communication executed by a worm that ~~is~~ are recorded in ~~advance~~ advance, when the first communication is judged to be executed by a worm.

9-12. (Canceled)

13. (Currently Amended) A method for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

acquiring information related to a traffic and a communication address of a communication packet based on ~~setting information including unit time for~~ measurement parameters;

judging whether the communication ~~is~~ has been executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged at the judging that the communication is~~ judged to have been executed by the worm at the judging;

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting; and changing the ~~setting information upon it being judged at the judging that~~ measurement parameters when the communication is judged to have been executed by the worm at the judging,

wherein the acquiring includes ~~acquiring~~ acquiring, based on the measurement parameters changed at the changing, the information ~~based on the setting information changed at the changing~~ on the communication judged to have been executed by the worm at the judging.

14. (Canceled)

15. (Currently Amended) A device for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

an acquiring unit that acquires information related to a traffic and a communication address of a communication packet based on ~~setting information including unit time for~~ measurement parameters;

a judging unit that judges whether the communication ~~is~~ has been executed by the worm based on the information acquired and a predetermined judgment criteria;

a reference information extracting unit that extracts reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged by the judging unit that the communication is~~ judged to have been executed by the worm by the judging unit;

a blocking unit that blocks the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted by the reference information extracting unit; and

a setting changing unit that changes the ~~setting information upon it being~~

~~judged by the judging unit that~~ measurement parameters when the communication is judged to have been executed by the worm by the judging unit, wherein

the acquiring unit ~~acquires~~ acquires, based on the measurement parameters changed by the setting changing unit, the information ~~based on the setting information changed by the setting changing unit~~ on the communication judged to have been executed by the worm by the judging unit.

16. (Currently Amended) A device for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

an acquiring unit that acquires information related to a traffic and a communication address of a communication packet based on ~~setting information including unit time for~~ measurement parameters;

a judging unit that judges whether the communication ~~is~~ has been executed by the worm based on the information acquired and a predetermined judgment criteria;

a reference information extracting unit that extracts reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged by the judging unit that the communication is~~ judged to have been executed by the worm by the judging unit;

a blocking unit that blocks the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted by the reference information extracting unit; and

a setting changing unit that changes the judgment criteria ~~upon it being judged by the judging unit that~~ when the communication is judged to have been executed by the worm by the judging unit, wherein

the judging unit further judges whether the communication ~~is~~ judged to have been executed by the worm by the judging unit has been executed by the worm based on the information acquired by the acquiring unit and the judgment criteria changed~~ at the changing~~ by the setting changing unit.

17. (Previously Presented) The device according to claim 15, wherein the judging unit judges that a communication from a computer that is in the predetermined network segment is executed by the worm when

there is an increase in number of communication packets as well as number of destination addresses of communication packets that are transmitted from the predetermined network segment to the outside.

18. (Currently Amended) A device for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

an acquiring unit that acquires information related to a traffic and a communication address of a communication packet based on~~ setting information including unit time for~~ measurement parameters;

a judging unit that judges at a first time whether a computer in the predetermined network segment is infected by the worm based on the information acquired and a predetermined judgment criteria, and judges at a second time whether a plurality of computers in the predetermined network segment are infected by the worm;

a reference information extracting unit that extracts reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication upon it being judged at the first time by the judging unit that the computer is infected by the worm;

a blocking unit that blocks the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted by the reference information extracting unit,

wherein the judging unit judges at the second time that a plurality of computers in the predetermined network segment are infected by the worm when all three conditions are satisfied, the three conditions being that

a communication from the computer in the predetermined network segment is judged at the first time to be infected by the worm,

~~there is an increase in~~a number of communication packets that are transmitted from the predetermined network segment to the outside becomes greater than a number of the communication packets transmitted from the predetermined network segment to the outside when the computer is judged at the first time to be infected by the worm, and

a number of destination addresses of the communication packets that are transmitted from the predetermined network segment to the outside becomes greater than a number of destination addresses of the communication packets transmitted from the predetermined network segment to the outside when the computer is judged at the first time to be infected by the worm.

19-21. (Canceled)

22. (Currently Amended) A computer-readable recording medium for storing a computer program for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, the computer program causing a computer to perform:

acquiring information related to a traffic and a communication address of a communication packet based on~~setting information including unit time for~~ measurement parameters;

judging whether the communication~~is~~ has been executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged at the judging that the communication is~~ judged to have been executed by the worm at the judging; and

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting,

wherein the extracting includes summing up a number of the communication packets for each port number, the communication packets being transmitted in the communication ~~upon it being judged that~~ when the communication is judged to have been executed by the worm at the judging, and extracting as the reference information, a most frequently appeared port number of the communication packets transmitted in the communication ~~upon it being judged that the communication is~~ judged to have been executed by the worm at the judging.

23. (Currently Amended) A method for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

acquiring information related to a traffic and a communication address of a communication packet based on ~~setting information including unit time for~~ measurement parameters;

judging whether the communication ~~is~~ has been executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged at the judging that the communication is~~ judged to have been executed by the worm at the judging; and blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting,

wherein the extracting includes summing up a number of the communication packets for each port number, the communication packets being transmitted in the communication~~ upon it being judged that~~ when the communication is judged to have been executed by the worm at the judging, and extracting as the reference information, a most frequently appeared port number of the communication packets transmitted in the communication~~ upon it being judged that the communication is~~ judged to have been executed by the worm at the judging.

24. (Currently Amended) A device for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

an acquiring unit that acquires information related to a traffic and a communication address of a communication packet based on~~ setting information including unit time for~~ measurement parameters;

a judging unit that judges whether the communication~~ is~~ has been executed by the worm based on the information acquired and a predetermined judgment criteria;

a reference information extracting unit that extracts reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication~~ upon it being judged by the judging unit that the communication is~~ judged to have been executed by the worm by the judging unit; and

a blocking unit that blocks the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted by the reference information extracting unit, wherein the reference information extracting unit sums up a number of the communication packets for each port number, the communication packets being transmitted in the communication~~ upon it being judged that~~ when the communication is judged to have been executed by the worm by the judging unit, and extracts, as the reference information, a most frequently appeared port number of the communication packets transmitted in the communication~~ upon it being judged that the communication is~~ judged to have been executed by the worm by the judging unit.

25. (Currently Amended) A computer-readable recording medium for storing a computer program for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, the computer program causing a computer to perform:

acquiring information related to a traffic and a communication address of a communication packet based on~~ setting information including unit time for~~ measurement parameters;

judging whether the communication is executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication upon it being judged at the judging that the communication is executed by the worm;

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting,

wherein the extracting further includes summing up, for each direction of communication of a packet transmitted out from the predetermined network segment or transmitted to the predetermined network segment, a number of the communication packets transmitted in the communication upon it being judged that the communication is executed by the worm at the judging, and extracting, as the reference information, a direction of the communication wherein the number of the communication packets is over a threshold value.

26. (Canceled)

27. (Currently Amended) A method for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

acquiring information related to a traffic and a communication address of a communication packet based ~~on setting information including unit time for measurement~~ parameters;

judging whether the communication is executed by the worm based on the information acquired and a predetermined judgment criteria;

extracting reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication upon it being judged at the judging that the communication is executed by the worm; and

blocking the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted at the extracting,

wherein the extracting further includes summing up, for each direction of communication of a packet transmitted out from the predetermined network segment or transmitted to the predetermined network segment, a number of the communication packets transmitted in the communication upon it being judged that the communication is executed by the worm at the judging, and extracting, as the reference information, a direction of the communication wherein the number of the communication packets is over a threshold value.

28. (Currently Amended) A device for detecting a worm by monitoring a communication of a predetermined network segment that is connected to a network and judging whether the communication is executed by a worm, comprising:

an acquiring unit that acquires information related to a traffic and a communication address of a communication packet based on~~ setting information including unit time for~~ measurement parameters;

a judging unit that judges whether the communication is executed by the worm based on the information acquired and a predetermined judgment criteria;

a reference information extracting unit that extracts reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication upon it being judged by the judging unit that the communication is executed by the worm;

a blocking unit that blocks the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted by the reference information extracting unit,

wherein the reference information extracting unit further sums up, for each direction of communication of a packet transmitted out from the predetermined network segment or transmitted to the predetermined network segment, a number of the communication packets transmitted in the communication upon it being judged that the communication is executed by the worm by the judging unit, and extracts, as the reference information, a direction of the communication wherein the number of the communication packets is over a threshold value.

29-33. (Canceled)

34. (Currently Amended) A device for cutting off a communication executed by a worm by monitoring the communication between a predetermined network segment and outside of the predetermined network segment, comprising:

a worm judging unit that judges whether a communication ~~is~~ has been executed by the worm;

a reference information extracting unit that extracts reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication ~~upon it being judged by the worm judging unit that the communication is~~ judged to have been executed by the worm; and

a blocking unit that blocks the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted by the reference information extracting unit,

wherein the reference information extracting unit sums up a number of the communication packets for each port number, the communication packets being transmitted in the communication ~~upon it being judged that~~ when the communication is judged to have been executed by the worm by the worm judging unit, and extracts, as the reference information, a most frequently appearing port number of the communication packets transmitted in the communication ~~upon it being judged by the worm judging unit that the communication is~~ judged to have been executed by the worm by the worm judging unit.

35. (Previously Presented) A device for cutting off a communication executed by a worm by monitoring the communication between a predetermined network segment and outside of the predetermined network segment, comprising:

a worm judging unit that judges whether a communication is executed by the worm;

a reference information extracting unit that extracts reference information for identifying a communication packet to be blocked from a plurality of communication packets transmitted in the communication upon it being judged by the worm judging unit that the communication is executed by the worm; and

a blocking unit that blocks the communication packet that is transmitted between the predetermined network segment and the outside of the predetermined network segment based on the reference information extracted by the reference information extracting unit,

wherein the reference information extracting unit further sums up, for each direction of communication of a packet transmitted out from the predetermined network segment or transmitted to the predetermined network segment, a number of the communication packets transmitted in the communication upon it being judged by the worm judging unit that the communication is executed by the worm, and extracts, as the reference information, a direction of the communication wherein the number of the communication packets is over a threshold value.

36-40. (Canceled)

41. (Previously Presented) The computer-readable recording medium according to claim 3, wherein the judging includes judging that a communication from a computer that is in the predetermined network segment is executed by the worm when

there is an increase in number of communication packets as well as number of destination addresses of communication packets that are transmitted from the predetermined network segment to the outside.

42. (Canceled)

43. (Previously Presented) The computer-readable recording medium according to claim 8, wherein the judging includes judging that a communication from a computer that is in the predetermined network segment is executed by the worm

when

there is an increase in number of communication packets as well as number of destination addresses of communication packets that are transmitted from the predetermined network segment to the outside.